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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,914	07/24/2001	Kie Y. Ahn	M4065.0461/P461	2806

24998 7590 02/27/2003

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EXAMINER

FOONG, SUK SAN

ART UNIT	PAPER NUMBER
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2823

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	*Application No. 09/910,914	Applicant(s) AHN ET AL.	
	Examiner Suk-San Foong	Art Unit 2823	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 1/29/03 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☒ they raise the issue of new matter (see Note below);
 - (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

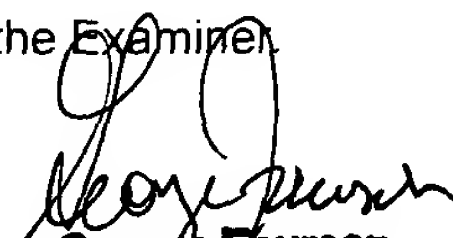
Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____


George Fourson
Primary Examiner
 2823

Continuation of 2. NOTE: The proposed amendments changing the scope to claims 1, 14 and 17 raise new issues that would require further consideration and/or search. Applicant does not point to support in the disclosure as originally filed for the proposed amendments.

Continuation of 5. does NOT place the application in condition for allowance because: Applicant argues that neither Jiang et al., Lopatin et al. nor AAPA (Applicant Admitted Prior Art) discloses forming a tungsten nitride layer by atomic-layer deposition using sequential surface reactions. However, applicant is directed to Col. 4, lines 31-32 and Col. 5, lines 20-25 of Lopatin et al. as stated in paragraphs 3 and 7 of the Office Action mailed on 11/5/02. Applicant argues that neither Jiang et al., Lopatin et al. nor AAPA discloses forming a material layer of methylsilsequiazane over a substrate. However, applicant is directed to instant page 8, line 13 to page 9, line 11 of AAPA, as stated in paragraph 3 of the Office Action mailed 11/5/02. Applicant argues that Jiang et al. does not disclose that the metal barrier layer is deposited by atomic-layer deposition using sequential surface reactions. However, Jiang et al. is not relied upon as containing that teaching. Lopatin et al. is relied on for that teaching instead. Applicant argues that the embodiment of Jiang et al. wherein silicon containing metal barrier layer by a specific co-deposition method is employed is disclosed to have particular advantages. However, the additional teachings pointed to do not render invalid the teachings relied on; namely, formation of a metal barrier layer by atomic-layer deposition on surface of IMD and trench. Applicant's remaining arguments relying on the proposed amendments which has not been entered.